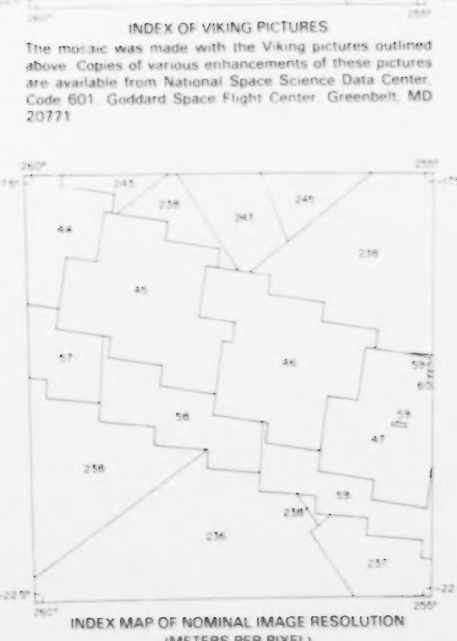
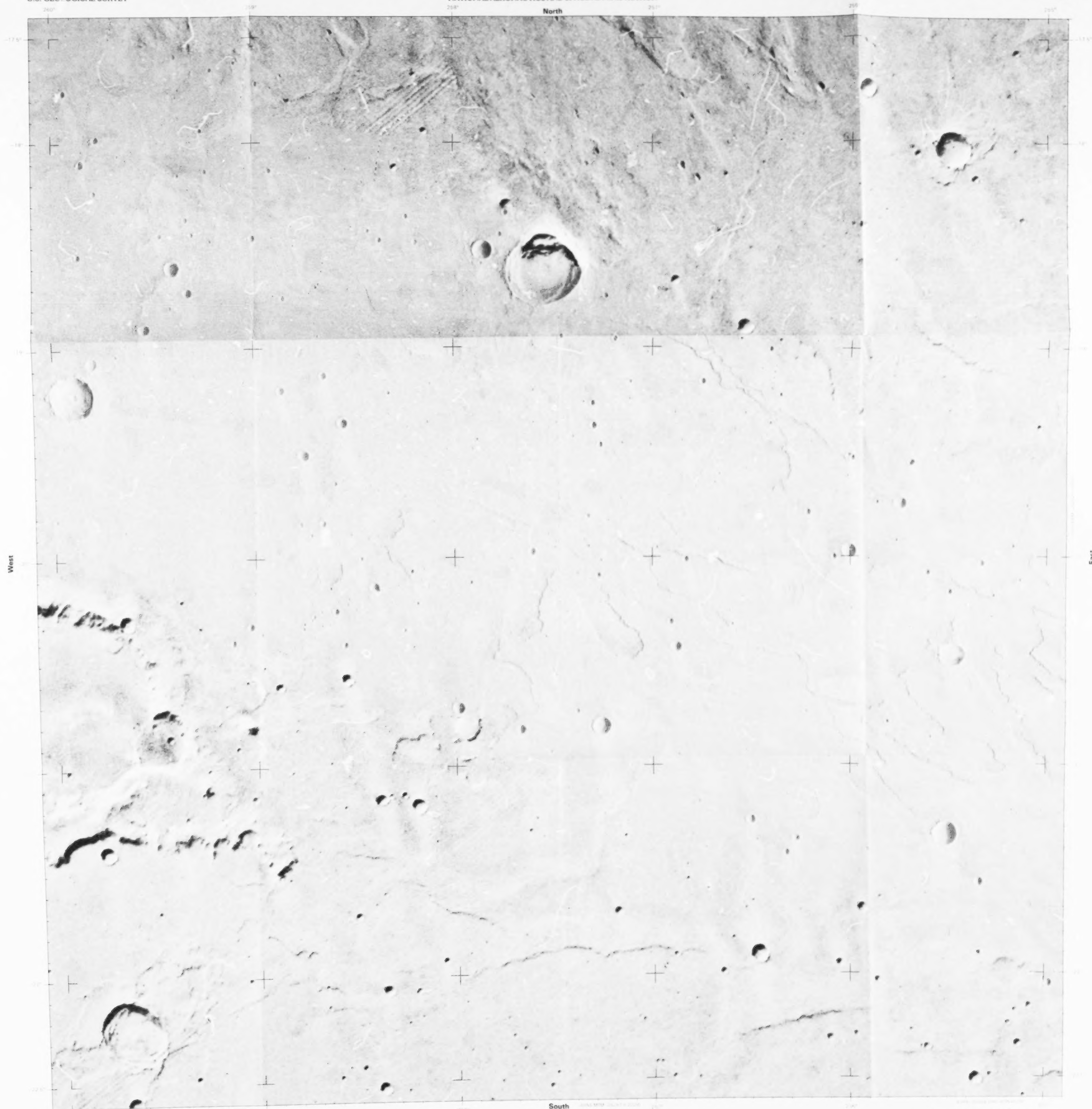


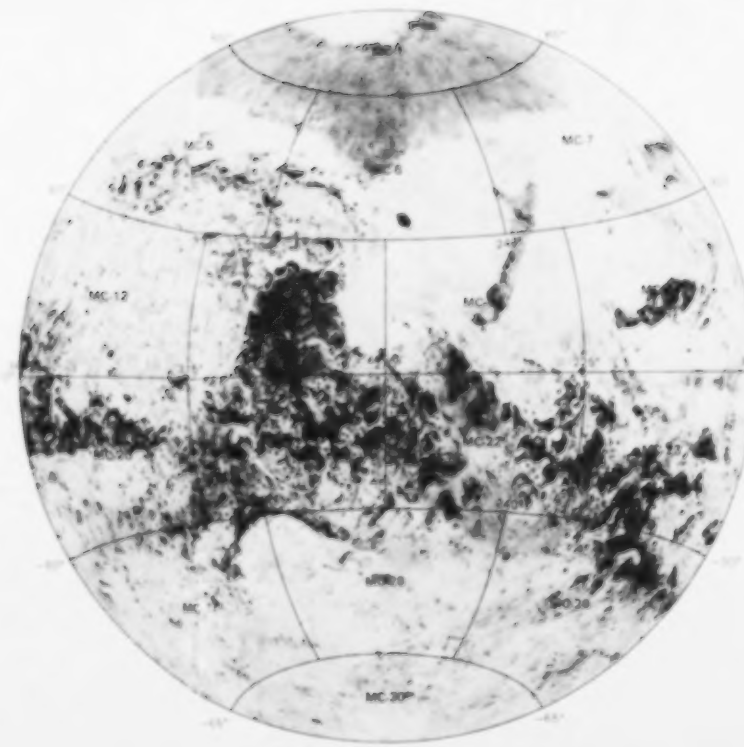


NOTE TO USERS
Users noting errors or omissions are urged to indicate them on the
topographic series. The U.S. Geological Survey, Building 4, Room
404, 1225 North Gemini Drive, Flagstaff, Arizona 86001. A color
reproduction will be returned.

NOTES ON BASE
This photomosaic is a part of an area of special scientific interest on Mars. It is included in a series designed to support future studies, which is not expected to result in systematic coverage of the planet. The mosaic was compiled by digital methods described by Barrow (1987) and Edwards (1987).
The distribution of Viking Orbiter images suitable for mapping at a scale of 1:500,000 is uneven, as are the locations of distribution of maps compiled. The mosaic is usually compiled in blocks of two or more adjacent quadrangles that are selected on the basis of scientific importance, not necessarily in areas of optimum coverage by high-resolution images or previous map controls. Image placement is based on a planimetric geographic control net that has a published standard error of 100 m (Muller and Scholer, 1984). A block of mosaic compiled in an area where controls have optimum distribution and precision is not likely to match surface blocks previously compiled in areas where controls are sparse or irregular. Where discrepancies exist between adjacent mosaics, the more recent compilation is likely to be more accurate.
This mosaic is part of a Mars Topographic Map series (MTM) system with 20° zones, the scale 1:500,000 at the central meridian of the zone containing this quadrangle is 1:500,000. The projection used is a pseudocylindrical projection of 1:500,000 with a scale factor of 1.00044 km and a polar radius of 3395.7 km.
Digital processing and remosaicing were done by E. M. Lee.

NOMENCLATURE
All names shown on the reduced base mosaic are approved by the International Astronomical Union (IAU, 1974).
M 500k -20/257 CM Abbreviation for Mars, 1:500,000 series, center of sheet lat 20° S, long 257° controlled photomosaic (CM).

REFERENCES
Barrow, R.M., 1987, Digital cartography of the planets: New methods, its status, and its future. *Photogrammetric Engineering*, v. 53, no. 9, p. 1211-1218.
Edwards, Kathleen, 1987, Geometric processing of digital images of the planets. *Photogrammetric Engineering and Remote Sensing*, v. 53, no. 9, p. 1219-1222.
International Astronomical Union, 1974, Commission 16. *Physical study of planets and satellites, and their relation to the solar system*. Proceedings of the 15th General Assembly, Suva, 1973. *Transactions of the International Astronomical Union*, v. 18, p. 185-221.
Wu, S.S.C., and Scholer, F.J., 1984, Mars control network. *American Society of Photogrammetry*, in *Technical papers of the 50th annual meeting of the American Society of Photogrammetry*, v. 2, Washington, D.C., March 11-16, 1984, p. 456-463.



QUADRANGLE LOCATION
Photomosaic location is shown in the eastern hemisphere of Mars. An outline of 1:500,000-scale quadrangles is provided for reference.



LOCATION OF SELECTED FEATURES
Contrast in the reduced base mosaic was purposely suppressed to emphasize the names.

CONTROLLED PHOTOMOSAIC OF THE MTM -20257 QUADRANGLE, TYRRHENA PATERA REGION OF MARS